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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, WA 98101

December 29, 1999

Reply To
Attn Of ECL-113

Mr Al Ramsberger
Todd Pacific Shipyards Corporation
P O Box 3806
Seattle, Washington 98124

RE: Explanation of Significant Differences--Todd Shipyards Portion of the SSOU, Harbor Island, Seattle, Washington

Dear Mr Ramsberger

The U S Environmental Protection Agency (EPA) is pleased to send you the final copy of the Explanation of Significant Differences (ESD) that was signed by EPA on December 27, 1999 The ESD modifies the ROD-defined boundary of the Todd Shipyards site and designates the Todd Shipyards Sediment site as a separate operable unit (OU) from the Lockheed Martin Shipyard sediment site

By the first week in January, EPA is planning to send you a draft copy of an Administrative Order on Consent (AOC) with a Remedial Design Statement of Work (RD SOW) attached for your review I would like to meet the last week in January or the first week in February to begin legal and technical negotiations on these documents EPA expects negotiations will not take longer than a few weeks to conclude

If you would like to discuss this further, please call me at (206) 553-4951 or I can be reached at the following e-mail, "peterson-lee piper@epa gov"

Sincerely,

Piper L Peterson Lee
Remedial Project Manager

Enclosure

Courtesy Copies
Peter Adolphson, Washington Department of Ecology
Greg Baker, NOAA
June Boynton, Bureau of Indian Affairs
Kathy Bragdon-Cook, Washington Department of Natural Resources
Randy Carman, Washington Department of Fish and Wildlife
Bill Enkeboll, Landau
Helen Hillman, NOAA
Richard Kauffman, ATSDR
Jeff Krausmann, US Fish and Wildlife Service
Nmandi Madakor, Ecology
John Malek, EPA
Phyllis Meyers, Suquamish Tribe
Nancy Musgrove, Weston
Charles Ordine, EPA
Carl Osaki, Seattle-King County Department of Health
Pete Rude, Landau
Glen St Amant, Muckleshoot Indian Tribe
Richard Stedman, Washington Department of Health
Trace Warner, Washington Department of Health (cover only)
Bill Winter, CH2M Hill

EXPLANATION OF SIGNIFICANT DIFFERENCE TO THE HARBOR ISLAND -- TODD SHIPYARDS PORTION OF THE SHIPYARD SEDIMENTS OPERABLE UNIT RECORD OF DECISION SEATTLE, WASHINGTON

A. Introduction

1 Site name and location. Harbor Island--Shipyard Sediments Operable Unit (SSOU), Seattle, Washington. The Record of Decision for the SSOU identifies a cleanup remedy for sediments adjacent to Todd and Lockheed Martin No 1 Shipyards Subsequent remedial design activities address either the Todd or Lockheed Martin Shipyards which are now considered separate Operable Units (OUs). These cleanup areas are called the Todd Shipyard Sediment Operable Unit (TSSOU) and the Lockheed Shipyard Sediment Operable Unit (LSSOU) This Explanation of Significant Differences (ESD) addresses the contaminated sediments in the TSSOU

Harbor Island is located at the mouth of the Duwamish River on the southern margin of Elliott Bay, approximately 1 mile southwest of downtown Seattle Todd Shipyards is located at the northwest corner of Harbor Island and faces Elliott Bay to the north and the West Waterway of the Duwamish River to the west (see Figure 1).

2 Lead Agency U S Environmental Protection Agency (EPA)

3 Support Agency State of Washington, Department of Ecology (Ecology)

4. Legal authorities for the Explanation of Significant Differences (ESD) Section 117(c) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U S C § 9617(c), and Section 300 435(c)(2) of the National Oil and Hazardous Substances Contingency Plan (NCP), authorize changes to the selected remedial action after issuance of a Record of Decision (ROD). This ESD documents changes to the selected remedial action for the Todd Shipyard Sediments Operable Unit (TSSOU)

5 Administrative Record File This ESD will become a part of the Administrative Record file (NCP §300 825(a)(2)) and is available to the public to review at the Records Center, 7th floor, 1200 Sixth Avenue, Seattle, Washington

6 The purpose of the ESD is to designate the Todd Shipyards site as an independent operable unit identified as the Todd Shipyards Sediment Operable Unit (TSSOU) and to redefine the boundary of the TSSOU identified in the November 1996 ROD based on additional information gathered during two remedial design investigations associated with this OU

B. Summary of Site History, Contamination Problems, and Selected Remedy

Harbor Island and the surrounding estuarine environment are highly industrialized Prior to 1905, the area consisted of tideflats with a few piling-supported structures (mainly railroad trestles) The island was created between 1903 and 1905 with dredged material from the construction of the East and West Waterways and the main navigational channel of the Duwamish River Since construction, the island has been used for commercial and industrial activities

Harbor Island was identified by EPA as a Superfund site in 1983 Preliminary investigations conducted by EPA and Ecology revealed contamination of on-site soil and off-shore sediment Previous investigations have demonstrated the widespread occurrence in nearshore regions of Harbor Island and the lower Duwamish River of contaminants associated with industrial and municipal discharges EPA issued the ROD in November 1996, for the remediation of the Shipyard Sediments Operable Unit (SSOU), which includes sediments adjacent to both the Todd and the former Lockheed Shipyards EPA determined that cleanup actions were necessary because current conditions posed unacceptable risks over the long-term to benthic organisms and to subsistence fishers

The cleanup remedy states that (1) all sediment exceeding the chemical contaminant screening level (CSL) and shipyard waste be dredged and disposed of in an appropriate in-water or upland disposal facility, (2) that all sediments exceeding the chemical and/or biological sediment quality standards (SQS) be capped with a minimum of 2 feet of clean sediment, and (3) long-term monitoring of any capped areas is required The perimeter of the TSSOU was defined at the minus 42 foot Mean Lower Low Water (-42 MLLW) contour and by the eastern boundary shared with the Northeast Harbor Island sediment area identified by EPA in 1997

The -42 MLLW contour was originally established as a site boundary when EPA defined the site as an Operable Unit that would incorporate the nearshore subtidal sediments out to the edge of the steeper slopes of Elliott Bay and the West Waterway This site boundary was established because "these sediments are distinct from other contaminated sediments at Harbor Island they are predominately contaminated with hazardous substances and shipyard wastes (primarily sandblast grit) released by shipbuilding and maintenance operations at Todd (and Lockheed) Shipyards" (see ROD, Section E Scope and Role of Response Action Within the Remedial Strategy).

C Summary of the Explanation of Significant Differences to the Shipyard Sediment Operable Unit Record of Decision

Based on information provided in the Remedial Design Sampling and Analysis Reports, Phase 1A (Landau, 1999) and the Final Remedial Design (Phase 1B) Data Report (Roy F Weston 1999), EPA recommends that the site boundary for sediments remediation be revised based on Todd Shipyard property boundaries (including physical structures, such as piers and shipways),

chemical exceedences, identification of shipyard waste (i.e , abrasive grit blast and solid waste) and new bathymetric data. Sediment samples collected during the initial remedial design investigation indicated sediments on, or outside of, the -42 foot MLLW contour boundary exceeded the chemical or biological criteria in the Washington State Sediment Management Standards (SMS), exhibited properties of abrasive grit blast or solid waste, or exceeded a site-specific screening level for bioaccumulative chemicals of concern Therefore, the present ROD-defined operable unit boundary does not encompass all of the potentially contaminated sediments requiring remediation

EPA's specific site boundary changes are based on sample results that met a minimum of two of the following criteria, or two elements of a criterion (1) Todd Shipyards property boundaries and structures (e g , TS039, TS048, TS049, Pier No 5 and Dry Dock No 2), (2) CSL or 2 Lowest Adverse Effects Threshold (LAET) exceedances for copper, zinc, or PAHs (any 2 of the 3 contaminants, e g , TS048, TS049, and TS-RD-S16), (3) TBT or PCB screening level exceedances (any 2 of the 3 contaminants, e g , TS042, TS048 and (4) evidence of abrasive grit blast (e.g , TS049, adjacent to a visual observation) or solid waste (e g , TS041, TS044, and TS-RD-S16), identified from data collected by Evans-Hamilton on behalf of Todd Shipyards The ROD boundary is therefore relocated in the following locations

- The southern-most boundary should accurately reflect the upland property boundary extended into the West Waterway,
- The eastern boundary is expanded to include the area of the Todd Shipyards former sideslip shipway between Pier No 6 and the Mobil Oil pier, and reflect the upland property boundary extended into Elliott Bay,
- The northern boundary is expanded to encompass all Todd Shipyard property/structures, i e , to at the end of Dry Dock No 2 and Pier No 5,
- The western boundary is expanded in three areas to include Stations TS041, TS042 and TS-RD-S16, and thereby include all of the identified contaminated stations within the TSSOU This new boundary is to be placed halfway between the contaminated station and the next clean station.

The new ROD boundary is identified in Figure 2

- Public Participation Activities

The attached Fact Sheet was distributed to the Harbor Island mailing list of approximately 250 individuals In addition, the Fact Sheet was made available for public review at the information repository listed on the back page of the Fact Sheet (see Attachment 1) Due to the degree of historical public interest at this site, EPA did not have a public comment period in conjunction with this ESD

- Administrative Record

This ESD, the attached Fact Sheet, the Record of Decision, and the EPA Phase 1B Remedial Design report, and other reports and information related to the TSSOU are part of the administrative record for the Site The administrative record is available for public review at the following locations

In Seattle. Environmental Protection Agency
1200 Sixth Avenue, 7th floor
Seattle, Washington

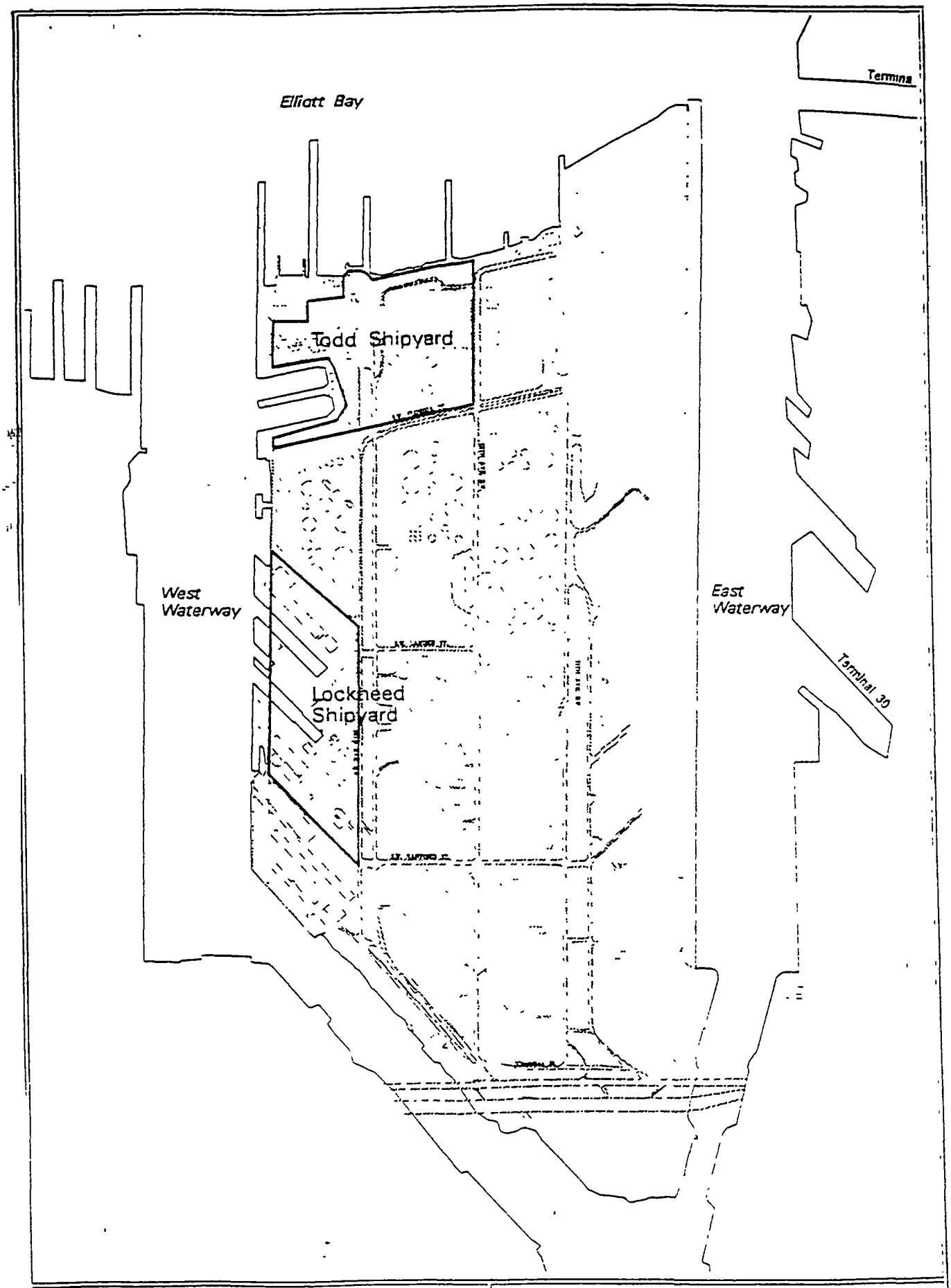
- Affirmation of Statutory Determinations

Considering the new information that has developed and the change that has been made to the selected remedy, EPA believes that the remedy remains protective of human health and the environment, complies with federal and state requirements that were identified in the ROD as applicable or relevant and appropriate to this remedial action, and is cost-effective The remedy continues to utilize permanent solutions and alternative treatment technologies to the maximum extent possible, as described in more detail in the Declaration of the ROD, Section I.

12/27/99

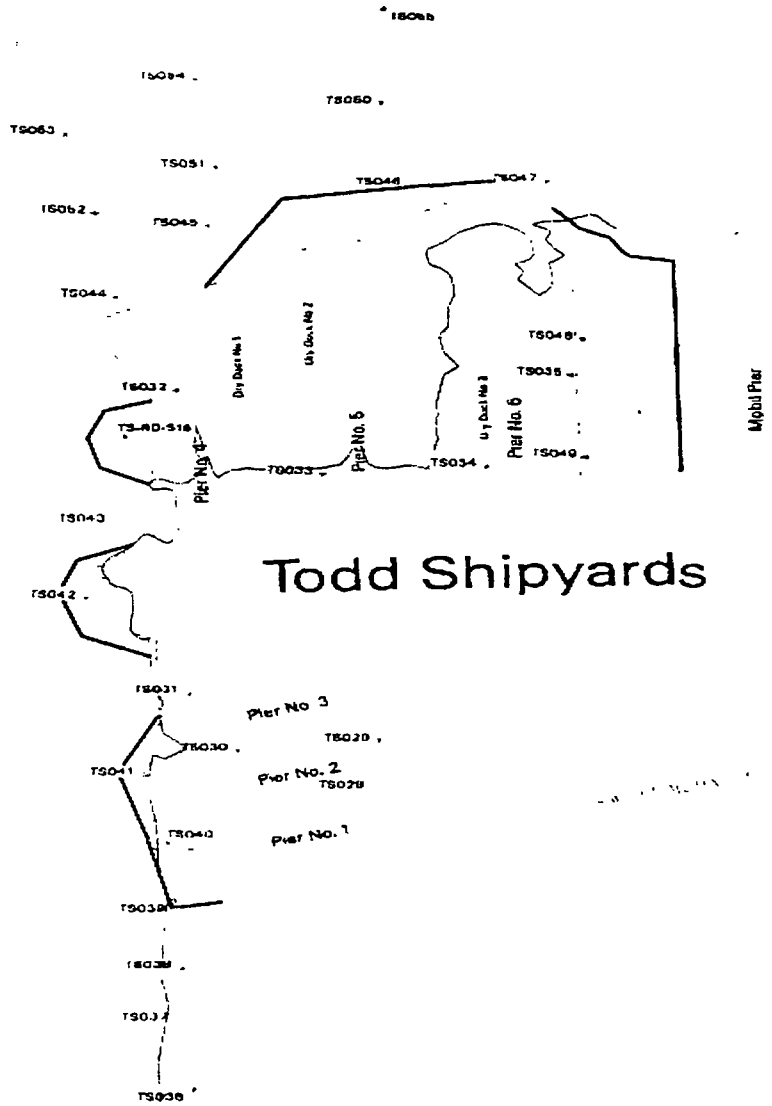
Mike Gearheard for
Director, Office of Environmental Cleanup

Date



Harbor Island Site Map

Figure 1



BASEMAP EXPLANATION

- Shoreline
- Structure Footprint
- Road Centerline
- Bathymetry
- 1998 ROD Boundary
- Bulkhead
- Relocated ROD Boundary
- -42 foot MLLW contour

SYMBOL EXPLANATION

- Surface Sediment Sample

NOTES

1. Contours in 5 foot increments
2. Datum NOAA MLLW

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Todd SY Site

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Todd Shipyards Sediment Operable Unit: Revised Site Boundary Map

Figure 2

SUPERFUND Fact Sheet

HARBOR ISLAND Seattle, Washington

EPA U S ENVIRONMENTAL PROTECTION AGENCY REGION December 1999

The U S Environmental Protection Agency (EPA) has expanded the boundaries of contaminated marine sediments around the Todd Shipyards facility and has designated the Todd Shipyard Sediment site as a distinct cleanup unit called the Todd Shipyard Sediment Operable Unit (TSSOU) This fact sheet describes those changes and provides an update on other Superfund activities taking place at the Harbor Island site

Shipyard Sediments Unit

In November 1996, EPA selected a cleanup plan at Todd and Lockheed Shipyards to dredge and dispose of the most contaminated sediments and place a clean sediment cap over any remaining contamination. Because these shipyards have distinct characteristics and different property owners, EPA is addressing Todd and Lockheed Shipyards sediments as separate cleanup units (see Figure 1)

Before cleanup design could begin, Todd Shipyards agreed to conduct additional sampling to identify sediment contamination exceeding state chemical criteria, conduct optional biological tests, and identify areas containing significant amounts of sandblast grit. The data show contamination outside the ROD boundary As a result, EPA collected samples outside of the ROD boundary to determine the extent of the contaminated sediments In addition, Todd Shipyards collected bathymetric data to determine the present contours and depths of the potential cleanup area, identified additional areas containing sandblast grit and shipyard debris and addressed other pre-design data gaps.

To address all of this new information, EPA is expanding and redefining the ROD boundary area at the TSSOU (see Figure 2) This change is outlined in a document called an Explanation of Significant Differences (ESD). A copy of the ESD and supporting documents are available at the EPA's office at 1200 Sixth Avenue in Seattle. If you would like to review the ESD, or any other document related to the site, please call the Records Center at (206) 553-4494 to arrange a time

Background

Harbor Island lies in an estuary at the mouth of the Duwamish River on the southern edge of Elliott Bay The island was constructed between 1903 and 1905 from sediments dredged from the Duwamish River to create the East and West Waterways and the navigational channel of the upper Duwamish River Since construction, the island has been used for ship building and maintenance, lead smelting, and other industrial activities

Harbor Island was added to EPA's National Priorities List (NPL) in 1983 when hazardous substances were found in soils on the island and in sediments near the island. The NPL is a list of sites targeted for further investigation and possible cleanup under Superfund authority.

For investigation and cleanup purposes, EPA has divided the Site into many "Operable Units" The site includes an upland portion and a marine sediment portion, which are further divided into Operable Units. Additional operable units may be created as site activities progress. Currently, the Washington Department of Ecology is overseeing the work on one of the upland portions, called the Tank Farms.

The upland portion is addressed by a 1993 cleanup plan for the Soil and Groundwater Operable Unit, and a 1994 cleanup plan for the upland Lockheed Shipyard Operable Unit. Cleanup activities were completed on the upland Lockheed Shipyard Unit and it has been removed from the NPL

The marine sediment "Operable Units" include the Todd Shipyard Sediment Operable Unit, the Lockheed Shipyard Sediment Operable Unit, the West Waterway Operable Unit, and the East Waterway Operable Unit. EPA has released a proposed plan for the West Waterway Operable Unit The comment period, which was to end on December 14th, has been extended and will now end on January 14, 2000 The East Waterway Operable Unit will be addressed at a future time

EPA and the Washington Department of Ecology are addressing contaminated sediments in the Lower Duwamish River separately

Soil and Groundwater Unit Update

This unit covers the upland portion of Harbor Island and the groundwater beneath the surface.

The cleanup decision for the Soil and Groundwater Unit includes 1) excavation and on-site treatment of petroleum hot spot soil, 2) disposal of PCB contaminated soil in an off-site hazardous waste facility, 3) removal and treatment of floating petroleum product and contaminated groundwater at Todd Shipyards, 4) capping exposed contaminated soil exceeding cleanup goals with three inches of asphalt, and 5) monitoring groundwater semi-annually for 30 years or until it is verified that the cleanup actions prevent contaminants from reaching the shoreline at concentrations which exceed cleanup goals.

Pumping petroleum from the ground at Todd Shipyard began in December 1998 and continues Approximately 1760 gallons of product were collected in July 1999 and 4040 gallons in August 1999. After the petroleum product is recovered, the soil will be treated using an enhanced bioventing technology to reduce the total petroleum hydrocarbon (TPH) levels in the soil. The bioventing treatment system is in design phase.

The TPH hot spot removal at the Port of Seattle's Terminal 18 is ready to begin construction. The removal of the contaminated soil above the water table (at low tide) should be accomplished this fall. The Port of Seattle will redesign the rail and road systems on the southern half of the site and cover the area with asphalt as part of their terminal expansion project. This project will effectively cap the parts of the site that are not already covered with paving

For More Information:

All documents for this site are located at the U S. Environmental Protection Agency, Region 10 at 1200 Sixth Avenue, Seattle, Washington. To view the documents, please call the Records Center at (206) 553-4494 to arrange a time to look at the documents.

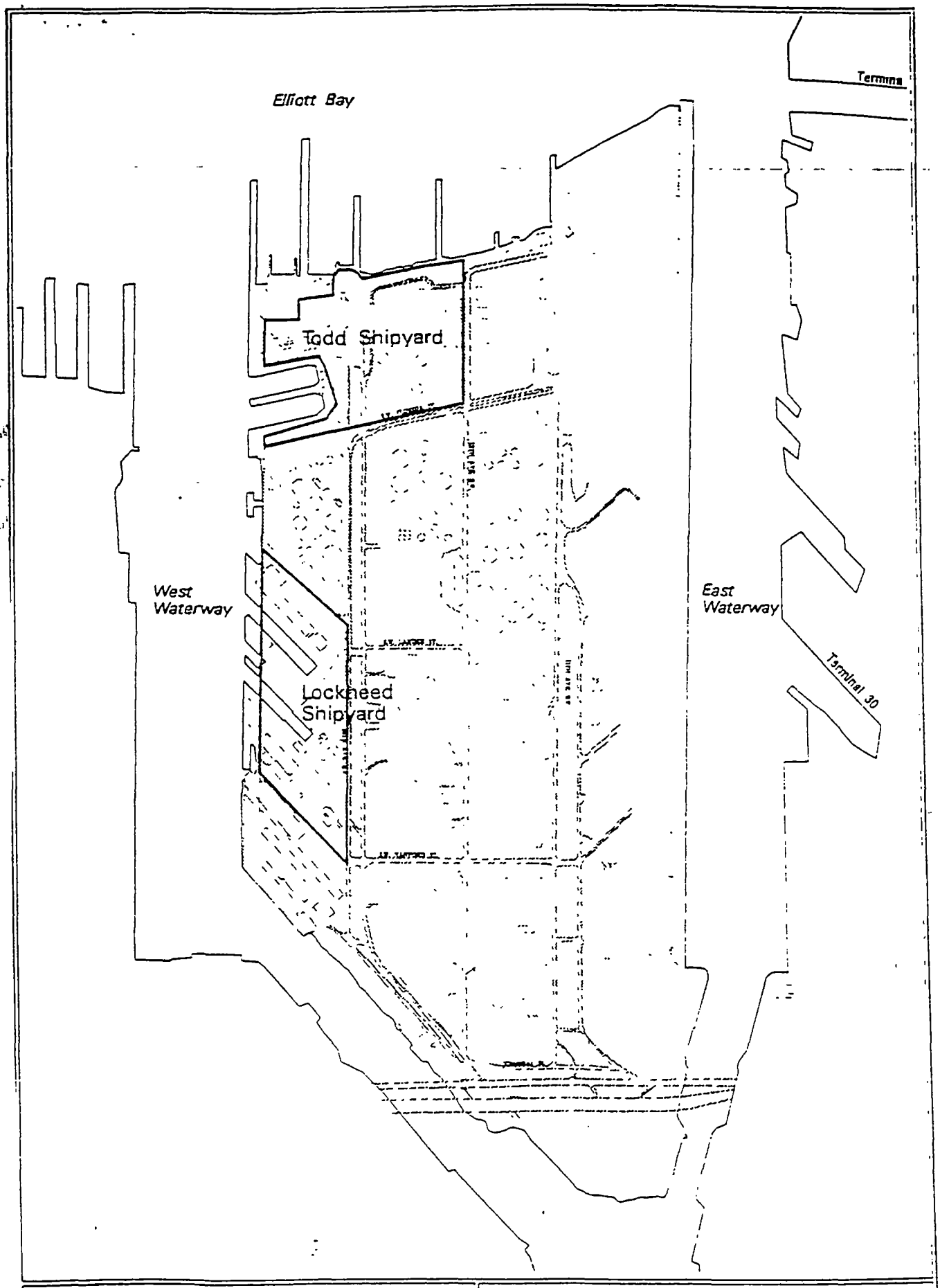
If you have any questions about this site, please contact one of the following people.

Soil and Groundwater Unit:
Neil Thompson, Project Manager,
at (206) 553-7177

Lockheed and Todd Shipyard Sediment Units
Piper Peterson Lee, Project Manager,
at (206) 553-4951

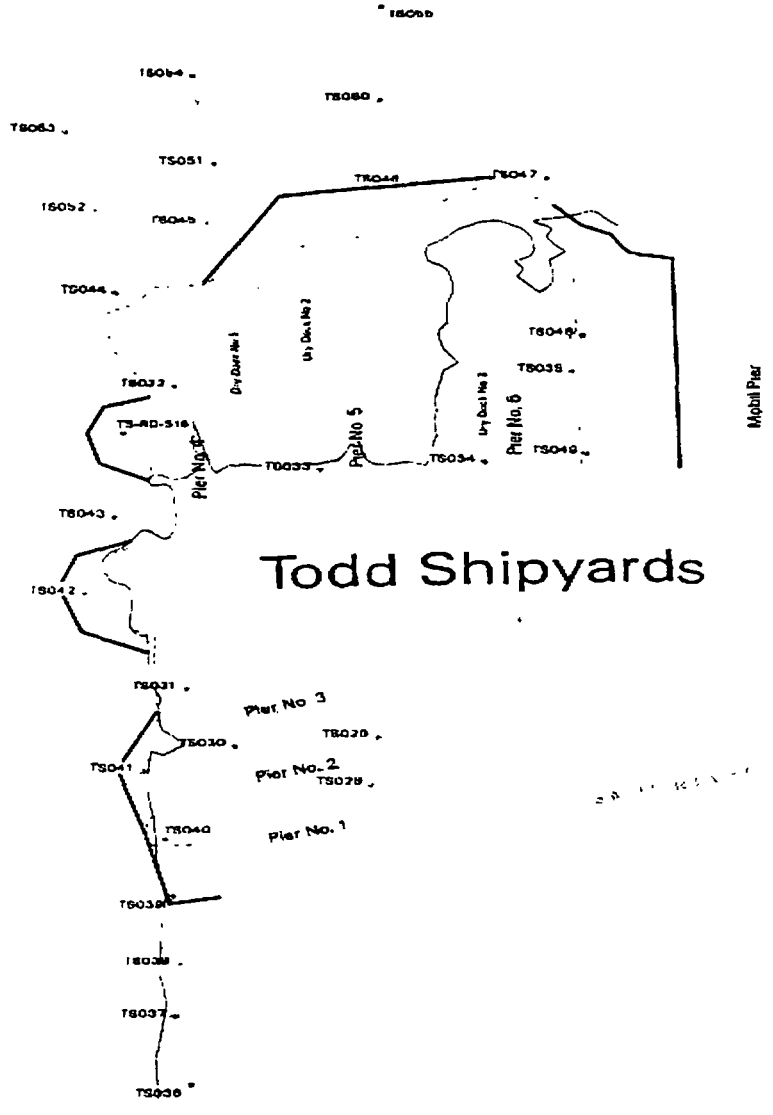
Marine Sediments Unit
Karen Keeley, Project Manager,
at (206) 553-2141

To ensure effective communication with everyone, additional services can be made available to persons with disabilities by contacting one of the EPA representatives.



Harbor Island Site Map

Figure 1



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Todd SY Site

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Todd Shipyards Sediment Operable Unit: Revised Site Boundary Map

Figure 2